

Amendment to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently Amended) A processor comprising:
2 a control register accessible to an operating system to store a current
3 privilege level for a task; and
4 a privilege remapper coupled to the control register and ~~adapted~~configured to
5 ~~dynamically~~ remap the stored current privilege level of the task, independent of the
6 operating system.
- 1 2. (Previously Presented) The processor of claim 1, wherein the privilege
2 remapper comprises a register to store a plurality of remapped current privilege
3 levels to be accessed using the stored current privilege level prior to runtime
4 privilege checking.
- 1 3. (Previously Presented) The processor of claim 1, wherein the privilege
2 remapper comprises a storage array to store a plurality of remapped current
3 privilege levels to be accessed using a configuration value and the stored current
4 privilege level prior to runtime privilege checking.
- 1 4. (Previously Presented) The processor of claim 1, wherein the privilege
2 remapper comprises one or more logical elements to logically alter one or more bits
3 of the stored current privilege level prior to runtime privilege checking.

1 5. (Previously Presented) The processor of claim 1, wherein the privilege
2 remapper further comprises at least one selector coupled to at least one of the one
3 or more logical elements to effectuate conditional performance of said logical
4 alteration for at least one bit of the stored current privilege level prior to runtime
5 privilege checking.

1 6. (Previously Presented) The processor of claim 1, wherein the processor
2 further comprises at least one selector coupled to the control register and the
3 privilege remapper to effectuate conditional performance of said remapping of the
4 stored current privilege level prior to runtime privilege checking.

1 7. (Currently Amended) A method comprising:
2 storing a first current privilege level for a task in a control register accessible
3 to an operating system; and
4 ~~dynamically~~ remapping the first current privilege level to a second current
5 privilege level, independent of the operating system, prior to runtime privilege
6 checking to effectuate a different execution privilege level for the task.

1 8. (Currently Amended) The method of claim 7, wherein said ~~dynamic~~
2 remapping comprises accessing a register to retrieve a selected one of a plurality of
3 remapped current privilege levels stored in said register, using the stored first
4 current privilege level, prior to runtime privilege checking.

1 9. (Currently Amended) The method of claim 7, wherein said ~~dynamic~~
2 remapping comprises accessing a storage array to retrieve a selected one of a
3 plurality of remapped current privilege levels stored in said storage array in a set-

4 wise manner, using a configuration value and the stored first current privilege level,
5 prior to runtime privilege checking.

1 | 10. (Currently Amended) The method of claim 7, wherein said ~~dynamic~~
2 remapping comprises logically altering one or more bits of the stored first current
3 privilege level, prior to runtime privilege checking.

1 | 11. (Original) The method of claim 10, wherein said altering being
2 conditionally performed.

1 | 12. (Currently Amended) The method of claim 7, wherein said ~~dynamic~~
2 remapping being conditionally performed.

1 | 13. (Currently Amended) In a processor having a 4-ring privilege protection
2 scheme, where tasks attributed with a lower ring current privilege level is more
3 privileged than tasks attributed with a higher ring current privilege level, a method
4 comprising:

5 | attributing a ring-2 current privilege level to a first task for an operating
6 system, nominally giving said first task more privilege than a second plurality of
7 tasks which are attributed with a ring-3 current privilege level for an operating
8 system; and

9 | ~~dynamically~~ remapping each ring-2 current privilege level to a ring-3 current
10 privilege level, and each ring-3 current privilege level to a ring-2 current privilege
11 level prior to runtime privilege checking to cause said first task to execute in fact with
12 less privileges than said second plurality of tasks, the remapping being performed
13 independent of the operating system.

1 14. (Original) The method of claim 13, wherein said first task is associated
2 with an Internet application.

1 15. (Original) The method of claim 13, wherein said second plurality of tasks
2 are associated with an operating system.

1 16. (Currently Amended) A method comprising:
2 attributing a first current privilege level to a first collection of programming
3 instructions for an operating system, said first current privilege level being different
4 from a second current privilege level assigned to a second collection of
5 programming instructions for the operating system, resulting in said first collection of
6 programming instructions to execute by a processor with a first relative current
7 privilege relationship to said second collection of programming instructions at
8 execution time; and
9 ~~dynamically~~ remapping said first current privilege level to a third current
10 privilege level prior to runtime privilege checking to cause the first collection of
11 programming instructions to execute by the processor with a second different
12 relative current privilege relationship to said second collection of programming
13 instructions, the remapping being performed independent of the operating system.

1 17. (Currently Amended) ~~The A method of claim 16, comprising:~~
2 attributing a first current privilege level to a first collection of programming
3 instructions, said first current privilege level being different from a second current
4 privilege level assigned to a second collection of programming instructions, resulting
5 in said first collection of programming instructions to execute with a first relative
6 current privilege relationship to said second collection of programming instructions
7 at execution time;

8 remapping said first current privilege level to a third current privilege level
9 prior to runtime privilege checking to cause the first collection of programming
10 instructions to execute with a second different relative current privilege relationship
11 to said second collection of programming instructions; and

12 said second and third current privilege levels are the same current privilege
13 level, and said method further comprises ~~dynamically~~-remapping said second
14 current privilege level of said second collection of programming instructions to a
15 fourth current privilege level prior to runtime privilege checking.

1 18. (Previously Presented) The method of claim 17, wherein said first and
2 fourth current privilege levels are the same current privilege level.

1 19. (Currently Amended) A method comprising:

2 attributing a first more privileged current privilege level to a first subset of
3 least privileged tasks attributed with a least privileged current privilege level for an
4 operating system, for execution by a processor; and

5 ~~dynamically~~-remapping said first more privileged current privilege level
6 attributed to said first subset of least privileged tasks to said least privileged current
7 privilege level for execution by the processor, and remapping said least privileged
8 current privilege level attributed to residual ones of said least privileged tasks prior to
9 runtime privilege checking to cause said first subset of least privileged tasks to be
10 executed by the processor with lesser privileges than said residual ones of the least
11 privileged tasks, the remapping being performed independent of the operating
12 system.

1 20. (Previously Presented) The method of claim 19, wherein said least
2 privileged current privilege level of said residual ones of said least privileged tasks
3 are remapped to said first more privileged current privilege level.

1 21. (Currently Amended) A method comprising:
2 attributing a first lesser privileged current privilege level to a first subset of
3 most privileged tasks attributed with a most privileged current privilege level for an
4 operating system, for execution by a processor; and
5 ~~dynamically~~ remapping said first lesser privileged current privilege level
6 attributed to said first subset of most privileged tasks to said most privileged current
7 privilege level for execution by the processor, and remapping said most privileged
8 current privilege level attributed to residual ones of said most privileged tasks prior
9 to runtime privilege checking to cause said residual ones of the most privileged
10 tasks to be executed by the processor with lesser privileges than said first subset of
11 most privileged tasks, the remapping being performed independent of the operating
12 system.

1 22. (Previously Presented) The method of claim 21, wherein said most
2 privileged current privilege level of said residual ones of said most privileged tasks
3 are remapped to said first lesser privileged current privilege level.

1 23. (Currently Amended) A processor comprising:
2 a control register accessible to an operating system to store a current
3 privilege level for a task, using an instruction of the processor; and
4 a privilege remapper coupled to the control register and ~~adapted~~ configured to
5 ~~dynamically~~ remap the stored current privilege level prior to runtime privilege
6 checking, independent of the operating system, the instruction and the task.

1 24. (Previously amended) The processor of claim 23, wherein the processor
2 further comprises at least one selector coupled to the control register and the
3 privilege remapper to effectuate conditional performance of said remapping of the
4 stored current privilege level prior to runtime privilege checking.

1 25. (Currently Amended) An apparatus comprising:
2 a control register accessible to an operating system to store a current
3 privilege level for a task, using an instruction; and
4 a privilege remapper coupled to the control register and ~~adapted~~configured to
5 ~~dynamically-remap~~ the stored current privilege level prior to runtime privilege
6 checking, independent of the operating system, the instruction, and the task.

1 26. (Previously presented) The apparatus of claim 25, wherein the apparatus
2 further comprises at least one selector coupled to the control register and the
3 privilege remapper to effectuate conditional performance of said remapping of the
4 stored current privilege level prior to runtime privilege checking.